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CLAIMS:

1. A method for controlling the operation of devices (61,62,63) of a hydrocarbon production system, comprising the steps of:-

5 (a) connecting at least one remote master controller (101) to at least two central controllers (100) via a command/signal bus (120) and connecting the at least two central controllers (100) to at least one local controller via a common data bus (130), the central controllers (100) being reprogrammable and the local controller(s) being configured to locally control the operation of at least one
10 respective device (61,62,63),

(b) transmitting data between the central controllers (100) and the local controller(s) via the common data bus (130) in response to said central controllers (100) receiving signals,

(c) processing said transmitted data at the local controller(s), and

15 (d) transmitting data between the local controller(s) and its associated device(s) (61,62,63) according to the processed data so as to locally control the operation of the device(s) (61,62,63).

2. The method as claimed in claim 1, wherein method step (b) includes
20 transmitting data between the central controllers (100) and the local controller(s) in response to said central controllers (100) receiving signals from any other central controller, and/or from the local controller(s).

3. The method as claimed in claim 1 or 2, including the step of transmitting
25 data between the master controller(s) (101) and the central controllers (100) so as to remotely monitor the central controllers.

4. The method as claimed in any preceding claim, including the steps of
30 adding at least one device (64) and its associated local controller(s) to the hydrocarbon production system, transmitting data between the remote master

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controller(s) (101) and the central controllers (100), and reprogramming the central controllers (100) to enable said newly added device(s) (64) and its local controller(s) to be used in the method.

5 5. The method as claimed in any preceding claim, including the steps of transmitting data between the remote master controller(s) (101) and the central controllers (100), and reprogramming the central controllers (100) to enable the central controllers (100) to control existing local controllers in a different manner.

10 6. The method as claimed in any preceding claim, including the step of feeding back data signals from the device(s) (61,62,63) to the local controller(s).

7. The method as claimed in any preceding claim, including the step of feeding back data signals from the local controller(s) to the central controllers
15 (100).

8. The method as claimed in any preceding claim, wherein method step (d) includes controlling the device(s) (61,62,63) by at least activating or powering a sensor (62) and/or valve (63), and/or actuating a compressor, pump and/or
20 actuator (61).

9. The method as claimed in any preceding claim, including the step of connecting the central controller (100) of one subsea control module (50a) to one or more central controllers (100) contained in one or more other subsea control
25 modules (50b) in the same or another field development (170,180) via the command/signal bus (120), and wherein method step (b) comprises transmitting data between any of the central controllers (100) and any of the local controllers contained in a retrievable module (49a,49b) or a tree (30') of the same field development (170) via the common data bus (130).

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10. A system for controlling the operation of devices (61,62,63) of a hydrocarbon production system, comprising:-

(a) connecting means (130) for connecting at least two central controllers (100) to at least one local controller, the central controllers being reprogrammable and the local controller(s) being configured to locally control the operation of at least one respective device (61,62,63), and control means (101) for remotely controlling the central controllers (100) and transmitting means (120) for transmitting data between the control means (101) and the central controllers (100),

(b) transmitting means (130) for transmitting data between the central controllers (100) and the local controller(s) in response to said central controllers (100) receiving signals,

(c) processing means for processing said transmitted data at the local controller(s), and

(d) transmitting means for transmitting data between the local controller(s) and its associated device(s) (61,62,63) according to the processed data so as to locally control the operation of the device(s).

11. The system as claimed in claim 10, including means (130) for feeding back data signals from the device(s) (61,62,63) to the local controller(s) and from the local controller(s) to the central controllers (100).

12. A computer program product comprising program code means stored in a computer readable medium for performing a method according to any one of the method steps as claimed in any one of claims 1 to 9 when that product is run on a computer.